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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,966	03/02/2004	Santosh P. Gaur	RPS920020014US1	2143
26675 7590 10/10/2007 DRIGGS, HOGG & FRY CO. L.P.A. 38500 CHARDON ROAD DEPT. IRA WILLOUGBY HILLS, OH 44094			EXAMINER KANE, CORDELIA P	
			ART UNIT 2132	PAPER NUMBER
			NOTIFICATION DATE 10/10/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/790,966	GAUR ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Cordelia Kane	2132	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/4/04</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see Remarks/Arguments, filed August 9, 2007, with respect to the rejections of claims 1 – 26 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new grounds of rejection is made.

### ***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 22 – 26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims fail to place the invention squarely within one statutory class of invention. In paragraph 47 of the instant specification, applicant has provided evidence that applicant intends the “medium” to include a propagation medium. A propagation medium is not one of the four categories of invention and therefore the claims are not statutory.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 2, 4 – 7, 9, 12 – 16, 20 – 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Noehring et al's US Publication 2002/0188871 A1. Referring to claim 1, Noehring teaches:

- a. A memory controller configured to transfer data received from the network to the memory (page 2, paragraph 37).
- b. A network interface coupled to the memory controller comprising:
  - i. A first data moving unit configured to exchange secure data with a first portion of the network and a second DMU configured to exchange non-secure data with a portion of the network (page 3, paragraph 43, Figure 5). Since the inbound and outbound packets are IP packets, and clear text packets respectively and they may be split into a dedicated mode with dedicated channels for each one.
- c. Logic configured to retrieve a portion of the data from the memory using the memory controller (page 2, paragraph 37).
- d. Logic configured to perform security operations on the retrieved portion of the data (page 2, paragraphs 37-38).
- e. Logic configured to store the operated on portion of the data in memory using the memory controller wherein the memory controlled is further configured to transfer the operated on portion of the data from memory to the network (page 2-3, paragraph 38).

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6. Referring to claim 2, Noehring teaches that the first and second DMU directly communicate with the first and second portions of the network (Figure 5, 528 and 562).
7. Referring to claim 4, Noehring teaches:
  - f. Logic configured to obscure the portion of the data when the retrieved portion is non-secure data (Figure 5, 518).
  - g. Logic configured to decipher the portion of the data when the retrieved portion is secure data (Figure 5, 546).
  - h. Logic configured to determine an integrity of the portion of data (pages 2-3, paragraph 38).
8. Referring to claim 5, Noehring teaches performing quality of service operations on the data in coordination with the performing of security operations (pages 2-3, paragraph 38).
9. Referring to claim 6, Noehring teaches logic configured to identify an information flow associated with the portion of data, to determine the priority of that portion of data, and to schedule transferring the operated on portion of the data from memory based on the priority information (page 5, paragraph 58).
10. Referring to claim 7, Noehring teaches:
  - i. Logic configured to decipher the portion of the data prior to identifying the information flow when the retrieved portion is secure data (figure 5, 546, 550, page 3, paragraph 38).

- j. Logic configured to obscure the portion of the data after identifying the information flow when the retrieved portion is non-secure data (Figure 5, 518, 520).
11. Referring to claims 9 and 21, Noehring teaches referencing the memory banks in a sequence that minimizes memory access time (page 3, paragraph 42).
12. Referring to claims 12 and 22, Noehring teaches:
- k. Transferring data received from the network to the memory (page 2, paragraph 37).
  - l. Retrieving a portion of the data from the memory using the memory controller (page 2, paragraph 37) wherein the portions of the data having higher priority information flow are retrieved before portions having lower priority (page 5, paragraph 58).
  - m. Performing security operations on the retrieved portion of the data (page 2, paragraphs 37-38).
  - n. Storing the operated on portion of the data in memory using the memory controller wherein the memory controlled is further configured to transfer the operated on portion of the data from memory to the network (page 2-3, paragraph 38).
13. Referring to claims 13 and 23, Noehring teaches:
- o. Obscuring the portion of the data when the retrieved portion is non-secure data (Figure 5, 518).

- p. Deciphering the portion of the data when the retrieved portion is secure data (Figure 5, 546).
  - q. Determining an integrity of the portion of data (pages 2-3, paragraph 38).
14. Referring to claims 14 and 24, Noehring teaches performing quality of service operations on the data in coordination with the performing of security operations (pages 2-3, paragraph 38).
15. Referring to claims 15, and 25, Noehring teaches logic configured to identify an information flow associated with the portion of data, to determine the priority of that portion of data, and to schedule transferring the operated on portion of the data from memory based on the priority information (page 5, paragraph 58).
16. Referring to claim 16, Noehring teaches:
- r. Logic configured to decipher the portion of the data prior to identifying the information flow when the retrieved portion is secure data (figure 5, 546, 550, page 3, paragraph 38).
  - s. Logic configured to obscure the portion of the data after identifying the information flow when the retrieved portion is non-secure data (Figure 5, 518, 520).
17. Referring to claim 20, Noehring teaches including error correcting code with the data transferred to or stored in the memory and detecting errors in the data retrieved or transferred from the memory based on the error correcting code included with the data (page 7, paragraph 79).

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***Claim Rejections - 35 USC § 103***

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

20. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noehring as applied to claim 1 above, and further in view of Namik Kocaman et al's US

Publication 20040030513 A1. Noehring discloses all the limitations of the parent claim.

Noehring does not explicitly disclose having a SERDES circuit coupled between the

DMU and the network. However, Kocaman discloses that it is known that network

components include a serializer-deserializer to convert the serial stream of data into

parallel and parallel into serial (page 1, paragraph 5). Noehring and Kocaman are

analogous art because they are from the same field of endeavor, network processing.

At the time of the invention, it would have been obvious to one of ordinary skill in the art,

having the teachings of Noehring and Kocaman before him or her, to modify the system



of Noehring to include the serializer-deserializer of Kocaman. The motivation for doing so would have been that it is well known in the art that (page 1, paragraph 5).

21. Claims 8, 17 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noehring as applied to claims 1, 12 and 22 above, and further in view of Masafumi Nozawa et al's US Patent 5,235,641. Noehring discloses all the limitations of the parent claims. Noehring does not explicitly disclose compressing and decompressing data before and after encryption. However, Nozawa discloses:

- t. Compressing the data prior to encrypting the data (column 3, lines 29-32).
- u. Decompressing the data after decrypting the data (claims 11 and 12).

22. Noehring and Nozawa are analogous art because they are from the same field of endeavor, encrypted data storage and retrieval. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Noehring and Nozawa before him or her, to modify the process of Noehring to include the compression of Nozawa. The motivation for doing so would have been to not lose the redundancy of data in a large quantity of data (column 3, lines 26-38).

23. Claims 10, 11, 18 and 19 are rejected under 35 USC 103 (a) as being obvious over Noehring in view of John Trost et al's US Patent 4,627,018. Referring to claims 10 and 18, Noehring discloses all the limitations of the parent claim. Noehring does not appear to explicitly disclose grouping the memory requests together. However, Trost discloses grouping the memory requests together and not starting the second group

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before the first group is completed (column 2, lines 5-8). Noehring and Trost are analogous art because they are from the same field of endeavor of memory access. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Noehring and Trost before him or her, to modify Noehring to include grouping read and write requests, then completing one group before the other of Trost. The motivation for doing so would have been to eliminate the time gap between the groups of requests (column 1, lines 42-45). Therefore it would have been obvious to combine Trost with Noehring to obtain the invention as specified in the claim 18.

24. Referring to claim 11, Noehring teaches including error correcting code with the data transferred to or stored in the memory and detecting errors in the data retrieved or transferred from the memory based on the error correcting code included with the data (page 7, paragraph 79).

25. Referring to claim 19, Noehring teaches receiving (reading) data packets from memory in predetermined byte sizes (page 3, paragraph 42).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cordelia Kane whose telephone number is 571-272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CPK

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